# DATA PROCESSING SYSTEM AND MULTIPROCESSOR SYSTEM

## ABSTRACT

The present invention provides an information processing system that can have the optimum number of FIFO stages dynamically at any given time so that the system makes it possible to omit analyzing of the number of FIFO stages from data characteristics so as to improve the performance. The information processing system includes a data FIFO 22 for storing data sets and a next pointer 29 having the same number of storage positions as that of the data FIFO 22. A preceding data set is stored in the storage position "1" of the data FIFO 22 and a subsequent data set is stored in the storage position "7" of the data FIFO 22. At this time, the storage position "1" of the next pointer 29 stores "7" as information on a storage position for the subsequent data set. According to this information "7", the subsequent data set is read from the storage position "7" of the data FIFO 22.